REMARKS

In the Office Action mailed August 23, 2004, claims 1-7 and 20-26 were rejected under 35 U.S.C. §102(b) as anticipated by Gow et al., United States Patent No. 5,168,368 and under 35 U.S.C. §102(e) as anticipated by Gainey et al., United States Patent No. 6,313,519. Claims 2-7 and 21-26 were also rejected as obvious over Gow or Gainey in view of Aoki et al. United States Patent No. 4,903,114. Claims 8 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Gow et al. and Gainey et al. Claims 9-13 were rejected under 35 U.S.C. §103(a) as unpatentable over Aoki et al. in view of Gainey et al. and Lacap, United States Patent No. 5,905,299.

Claims 1-8 and 20-27 have been cancelled. Claim 9 is directed to a semiconductor package comprising an intermediate lead finger mounting substrate; a semiconductor die and an intermediate lead finger mounted on a first surface of the intermediate lead finger mounting substrate; a package lead; a bond wire having a first end coupled to the package lead, a second end coupled to a bond pad on the die and an intermediate portion attached to the intermediate lead finger mounting substrate; a heat sink coupled to a second surface of the intermediate lead finger mounting substrate; and a mold compound that encloses the die, a portion of the package lead, the bond wire, the intermediate lead finger and the heat sink.

In rejecting claim 9, the Examiner acknowledges that his primary reference, Aoki et al., does not disclose the use of a single bond wire running from the die to the package lead but relies on Gainey for such teaching. He also acknowledges that both Aoki and Gainey fail to teach a heat sink coupled to the second surface of an intermediate lead finger mounting substrate and the use of a mold compound but asserts that Lacap provides such teaching.

While Lacap does disclose the use of heat sink, he does not disclose the use of a heat sink on a side of an intermediate lead finger mounting substrate different from the side on which the semiconductor die is mounted. Indeed, Lacap does not disclose the use of any means for securing lead fingers at an intermediate point and, in particular, does not disclose the use of an intermediate lead finger mounting substrate.

Since Lacap does not disclose the use of an intermediate lead finger mounting substrate, he also does not suggest the specific structure claimed in claim 9 in which the heat sink is on one side of the intermediate lead finger mounting substrate and the semiconductor die is on the other side.

Since Lacap is concerned with improving the thermal performance of flatpack packages while Gainey and Aoki are concerned with supporting lead wires, there is also no suggestion in these references that the references be combined. Lacap simply does not mention the need for improving support for semiconductor bond wires and Aoki and Gainey do not address thermal performance issues. In the absence of any mention in one reference of the problems addressed by the other reference(s), there is simply no suggestion that the references be combined.

In conclusion, since Lacap does not disclose or suggest a structure in which a heat sink is mounted on one side of the an intermediate lead finger mounting substrate and a semiconductor die is mounted on another side, the applicants' claim 9 is patentable over references cited.

Dependent claims 10-13 are patentable for the same reason claim 9 is patentable.

For the foregoing reasons, applicants believe that all of the claims are now in condition for allowance and respectfully requests the Examiner to pass the subject application to issue. If for any reason the Examiner believes any of the claims are not in condition for allowance, he is encouraged to phone the undersigned at (212) 309-6632 so that any remaining issues may be resolved.

Respectfully submitted,

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Francis E Morris 24,615

Francis E. Morris (Reg. No.)
Morgan, Lewis & Bockius LLP
101 Park Avenue
New York, NY 10178
(212) 309-6632